sealing the internal volume of the container to form a sealed container;

hermetically heat sealing the container in a first sealing layer to form a first hermetically heat-sealed container enclosure;

hermetically heat sealing said first hermetically sealed container enclosure in a second sealing layer to form a second hermetically heat-sealed container enclosure;

enclosing said second hermetically heat-sealed container enclosure in a shipping carton to form a closed shipping package the contents of which include said chemical composition, said sealed container, and said first and second hermetically heat-sealed container enclosures;

transferring said closed shipping package with its contents in a non-sterile condition to an irradiation plant; and

externally irradiating said closed shipping package and its contents at the irradiation plant at a predetermined radiation level for a predetermined time interval to simultaneously sterilize said chemical composition, said sealed container, and said first and second hermetically heat-sealed container enclosures.

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2. ~~30~~. The method of claim ~~29~~ 1 comprising enclosing a plurality of said second hermetically heat-sealed container enclosures in each of a plurality of said shipping cartons to form a plurality of closed shipping packages, transferring said plurality of closed shipping packages and their contents in a non-sterile condition to an irradiation plant, and externally irradiating said closed shipping packages and their contents at the irradiation plant at a predetermined radiation level for a predetermined time interval to simultaneously sterilize the chemical compositions, the sealed containers, and the first and second hermetically heat-sealed container enclosures contained in each closed shipping package.

3. ~~31~~. The method of claim ~~30~~ 2 wherein each container is an aerosol container and including the step of pressurizing the internal volume of each aerosol container with an inert gas prior to sealing each container.

4. ~~32~~. The method of claim ~~29~~ 1 wherein said first and second sealing layers each consist of a single layer of a polyethylene plastic material.

5. ~~33~~. A method of storing a sterilized chemical composition and maintaining the sterilization shelf life of the sterilized chemical composition for a prolonged period of time, said sterilized chemical composition being contained in a plurality of sealed containers, each sealed container being hermetically sealed in a first hermetically sealed container enclosure, each first hermetically sealed container enclosure containing a sealed container being hermetically sealed in a second hermetically sealed container enclosure, a plurality of the second hermetically sealed container enclosures each containing a first hermetically sealed container enclosure and a sealed container being enclosed in a shipping enclosure to form a closed shipping package the contents of which have been sterilized by radiation at an irradiation plant and transported to a storage area for operational use, comprising the steps of:

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opening the closed shipping package and removing the sterilized second hermetically sealed container enclosures each containing a sterilized sealed container and a sterilized first hermetically sealed container enclosure from the closed shipping package;

storing the sterilized second hermetically sealed container enclosures each containing a sterilized sealed container and a sterilized first hermetically sealed container enclosure in the storage area for a period of time;

after the period of time, removing at least one of the sterilized second hermetically sealed container enclosures from the storage area, opening the removed second hermetically sealed container enclosure and transporting the sterilized first hermetically sealed container enclosure containing the sterilized sealed container to a sterile environment; and

opening the sterilized first hermetically sealed container enclosure in the sterile environment and removing the sterilized sealed container from the sterilized first hermetically sealed container enclosure for use of the sterilized chemical composition in the sterile environment.

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6. ~~34.~~ A closed shipping package adapted to be terminally sterilized with radiation comprising a plurality of non-sterile, sealed aerosol containers each having an internal volume and being charged with a quantity of a chemical composition and pressurized with an inert gas, a non-sterile first hermetically sealed container enclosure hermetically sealing each aerosol container, a non-sterile second hermetically sealed container enclosure hermetically sealing each first hermetically sealed container enclosure, each non-sterile second hermetically sealed container enclosure containing a non-sterile, sealed aerosol container contained within a non-sterile first hermetically sealed container enclosure, and a shipping carton enclosing a plurality of the non-sterile second hermetically sealed container enclosures to form a non-sterile closed shipping package, the non-sterile closed shipping package externally radiated at a predetermined radiation level for a predetermined time interval to simultaneously sterilize the chemical